

Hydration

Water is rarely thought of as a nutrient because it has no caloric value, but its importance in maintaining life is second only to oxygen.

Water output occurs in four ways

- evaporation from the skin
- evaporation from respiration
- excretion from kidneys
- excretion from the bowels

Water is essential for our health. Yet many athletes specifically in sports which have regular "weigh ins" or weight classes such as wrestling, rowing, boxing, & equestrian, use rapid weight loss strategies to effect the numbers on the scale prior to competition. Rapid weight loss comes in the form of water loss and can prove to be negative for the sport performance and even life-threatening.

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Effects of Dehydration

- headaches (early warning sign)
- reduced muscular strength
- decrease in work performance
- lower blood plasma volumes
- reduced cardiac function
- higher resting heart rate
- smaller stroke volume
- lower oxygen consumption
- impairs thermoregulation
- decreases renal flow (kidney function and urination)
- increases electrolyte loss and leads to muscle cramping

We can lose 40% of our body weight in starvation(losing fat, muscle) but a loss of 9%-12% in water loss can be fatal.

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Water Retention

Having enough water is extremely important in sport performance. Too much water in the body can also have negative effects.

Water retention can occur from a number of reasons. Often the food and beverage items we consume, or our exercise and diet patterns cause us to retain more water than necessary.

- foods high in salt, alcohol, caffeine will all cause water retention
- hormonal changes and supplements
- lack of fluid in normal diet
- medications
- specifically prior dehydration will cause the body to panic and retain the next available water amount

Athletes and non-athletes will suffer bloating when trying to lose weight quickly. Therefore the body does the opposite of what the person is trying to achieve.

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